

SEQUENCE LISTING

<110> Bramley, John A.
Plaut, Karen I.
Kerr, David

<120> TREATMENT OF STAPHYLOCOCCUS INFECTIONS

<130> Mastitis

<140> 00/000,000

<141> 2002-02-28

<160> 10

<170> PatentIn Ver. 2.1

<210> 1

<211> 1486

<212> DNA

<213> *Staphylococcus simulans*

<400> 1

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<210> 2
<211> 388
<212> PRT
<213> *Staphylococcus simulans*

<400> 2

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Leu Ser Thr Phe Ala Leu Ala Ser Ile Val Tyr Gly Gly Ile Gln Asn

	20				25							30			
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Glu Thr His Ala Ser Glu Lys Ser Asn Met Asp Val Ser Lys Lys Val

	35			40						45					
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Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val

	50		55			60									
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Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser

	65		70		75			80							
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Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro

	85			90			95								
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Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn

	100		105			110									
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Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu

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Val Glu Thr Ser Lys Ala Leu Val Gln Asn Arg Thr Ala Leu Arg Ala

	130		135		140										
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Ala Thr His Glu His Ser Gln Trp Leu Asn Asn Tyr Lys Gly Tyr

	145		150		155		160								
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Gly Tyr Gly Pro Tyr Pro Leu Gly Ile Asn Gly Gly Met His Tyr Gly

	165		170		175										
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Val Asp Glu Phe Met Asn Ile Gly Thr Pro Val Lys Ala Ile Ser Ser

	180		185		190										
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Gly Lys Ile Val Glu Ala Gly Trp Ser Asn Tyr Gly Gly Asn Gln

	195		200		205										
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Ile Gly Leu Ile Glu Asn Asp Gly Val His Arg Gln Glu Tyr Met His

210

215

220

Leu Ser Lys Tyr Asn Val Lys Val Gly Asp Tyr Val Lys Ala Gly Gln
225 230 235 240

Ile Ile Gly Trp Ser Gly Ser Thr Gly Tyr Ser Thr Ala Pro His Leu
245 250 255

His Phe Gln Arg Met Val Asn Ser Phe Ser Asn Ser Thr Ala Gln Asp
260 265 270

Pro Met Pro Phe Leu Lys Ala Ser Gly Tyr Gly Lys Ala Gly Gly Thr
275 280 285

Val Thr Pro Thr Pro Asn Thr Gly Trp Lys Thr Asn Lys Tyr Gly Thr
290 295 300

Leu Tyr Lys Ser Glu Ser Ala Ser Phe Thr Pro Asn Thr Asp Ile Ile
305 310 315 320

Thr Arg Thr Thr Gly Pro Phe Arg Ser Met Pro Gln Ser Gly Val Leu
325 330 335

Lys Ala Gly Gln Thr Ile His Tyr Asp Glu Val Met Lys Gln Asp Gly
340 345 350

His Val Trp Val Gly Tyr Thr Gly Asn Ser Gly Gln Arg Ile Tyr Leu
355 360 365

Pro Val Arg Thr Trp Asn Lys Ser Thr Asn Thr Leu Gly Val Leu Trp
370 375 380

Gly Thr Ile Lys

385

<210> 3

<211> 741

<212> DNA

<213> *Staphylococcus simulans*

<400> 3

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atggAACAC cagtaaaAGC tatttcaAGC ggaaaaATAG ttGAAGCTGG ttggAGTAAT 180
tacggaggAG gtaatcaaAT aggtcttatt gaaaATGATG gagtgcatAG acaatggat 240
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ggttggTCTG gaagcactgg ttattctaca gcaccacatt tacacttcca aagaatggtt 360

aactcattt cacagtcaac tgcccaagat ccaatgcctt tcttaaagag cgccaggat 420
gaaaaagcag gtggtacagt aactccaacg ccgaatacag gttggaaaac aaacaaatat 480
ggcacactat ataaatcaga gtcagctagc ttcacacacca atacagatat aataacaaga 540
acgactggtc catttagaag catgccgcag tcaggagtct taaaagcagg tcaaacaatt 600
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ctgtgggaa ctataaagtg a 741

<210> 4
<211> 1520
<212> DNA
<213> *Staphylococcus simulans*

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atttgaacgt gcgtgcacg acagcgtcgc gcccgcggc agagtccggc gcccgcggta 180
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tcgcgcgtggc gtcgcgcgcg tgcgtgtacg agcgcgcacatc cgcgcgcac aggggccgg 720
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cgccggggtc aggtcgaatt 1520

<210> 5
<211> 480
<212> PRT
<213> *Staphylococcus simulans*

<400> 5

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Leu Ser Thr Phe Ala Leu Ala Ser Ile Val Tyr Gly Gly Ile Gln Asn
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Glu Thr His Ala Ser Glu Lys Ser Asn Met Asp Val Ser Lys Lys Val
35 40 45

Ala Glu Val Glu Thr Ser Lys Pro Pro Val Glu Asn Thr Ala Glu Val
50 55 60

Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser
65 70 75 80

Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro
85 90 95

Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn
100 105 110

Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu
115 120 125

Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr
130 135 140

Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala
145 150 155 160

Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu
165 170 175

Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala
180 185 190

Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu
195 200 205

Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys
210 215 220

Ala Leu Val Gln Asn Arg Thr Ala Leu Arg Ala Ala Thr His Glu His
225 230 235 240

Ser Ala Gln Trp Leu Asn Asn Tyr Lys Tyr Gly Tyr Gly Tyr Gly Pro
245 250 255

Tyr Pro Leu Gly Ile Asn Gly Gly Ile His Tyr Gly Val Asp Phe Phe
260 265 270

Met Asn Ile Gly Thr Pro Val Lys Ala Ile Ser Ser Gly Lys Ile Val
275 280 285

Glu Ala Gly Trp Ser Asn Tyr Gly Gly Asn Gln Ile Gly Leu Ile
290 295 300

Glu Asn Asp Gly Val His Arg Gln Trp Tyr Met His Leu Ser Lys Tyr
305 310 315 320

Asn Val Lys Val Gly Asp Tyr Val Lys Ala Gly Gln Ile Ile Gly Trp
325 330 335

Ser Gly Ser Thr Gly Tyr Ser Thr Ala Pro His Leu His Phe Gln Arg
340 345 350

Met Val Asn Ser Phe Ser Asn Ser Thr Ala Gln Asp Pro Met Pro Phe
355 360 365

Leu Lys Ser Ala Gly Tyr Gly Lys Ala Gly Gly Thr Val Thr Pro Thr
370 375 380

Pro Asn Thr Gly Trp Lys Thr Asn Lys Tyr Gly Thr Leu Tyr Lys Ser
385 390 395 400

Glu Ser Ala Ser Phe Thr Pro Asn Thr Asp Ile Ile Thr Arg Thr Thr
405 410 415

Gly Pro Phe Arg Ser Met Pro Gln Ser Gly Val Leu Lys Ala Gly Gln
420 425 430

Thr Ile His Tyr Asp Glu Val Met Lys Gln Asp Gly His Val Trp Val
435 440 445

Gly Tyr Thr Gly Asn Ser Gly Gln Arg Ile Tyr Leu Pro Val Arg Thr
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Trp Asn Lys Ser Thr Asn Thr Leu Gly Val Leu Trp Gly Thr Ile Lys
465 470 475 480

<211> 492

<212> PRT

<213> Achromobacter lyticus

<400> 6

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Leu Ser Thr Phe Ala Leu Ala Ser Ile Val Tyr Gly Gly Ile Gln Asn
20 25 30

Glu Thr His Ala Ser Glu Lys Ser Asn Met Asp Val Ser Lys Lys Val
35 40 45

Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val
50 55 60

Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser
65 70 75 80

Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro
85 90 95

Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn
100 105 110

Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu
115 120 125

Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr
130 135 140

Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala
145 150 155 160

Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu
165 170 175

Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala
180 185 190

Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu
195 200 205

Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys
210 215 220

Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Leu Val

225 230 235 240

Gln Arg Thr Ala Leu Arg Ala Ala Thr His Glu His Ser Ala Gln Trp
245 250 255

Leu Asn Asn Tyr Lys Lys Gly Tyr Gly Tyr Gly Pro Tyr Pro Leu Gly
260 265 270

Ile Asn Gly Gly Met His Tyr Gly Val Asp Phe Phe Met Asn Ile Gly
275 280 285

Thr Pro Val Lys Ala Ile Ser Ser Gly Lys Ile Val Glu Ala Gly Trp
290 295 300

Ser Asn Tyr Gly Gly Asn Gln Ile Gly Leu Ile Glu Asn Asp Gly
305 310 315 320

Val His Arg Gln Trp Tyr Met His Leu Ser Lys Tyr Asn Val Lys Val
325 330 335

Gly Asp Tyr Val Lys Ala Gly Gln Ile Ile Gly Trp Ser Gly Ser Thr
340 345 350

Gly Tyr Ser Thr Ala Pro His Leu His Phe Gln Arg Met Val Asn Ser
355 360 365

Phe Ser Asn Ser Thr Ala Gln Asp Pro Met Pro Phe Leu Lys Ser Ala
370 375 380

Gly Tyr Gly Lys Ala Gly Gly Thr Val Thr Pro Thr Pro Asn Thr Gly
385 390 395 400

Trp Lys Thr Asn Lys Tyr Gly Thr Leu Tyr Lys Ser Glu Ser Ala Ser
405 410 415

Phe Thr Pro Asn Thr Asp Ile Ile Thr Arg Thr Thr Gly Pro Phe Arg
420 425 430

Ser Met Pro Gln Ser Gly Val Leu Lys Ala Gly Gln Thr Ile His Tyr
435 440 445

Asp Glu Val Met Lys Gln Asp Gly His Val Trp Val Gly Tyr Thr Gly
450 455 460

Asn Ser Gly Gln Arg Ile Tyr Leu Pro Val Arg Thr Trp Asn Lys Ser
465 470 475 480

Thr Asn Thr Leu Gly Val Leu Trp Gly Thr Ile Lys

<210> 7
 <211> 741
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: altered s.
 simulans lysostaphin gene

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 attggaacac cagtaaaagc tatttcaagc ggaaaaatag ttgaagctgg ttggagtaat 180
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 aattcatttt caaattcaac tgcccaagat ccaatgcctt tcttaaagag cgccaggat 420
 ggaaaaagcag gtggtacagt aactccaacg ccgaatacag gttggaaaac aaacaaatat 480
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 acgactggtc cattttagaag catgccgcag tcaggagtct taaaagcagg tcaaacaatt 600
 cattatgatg aagtgtatgaa acaagacggt catgtttggg taggttatac aggttaacagt 660
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 ctttggggaa ctataaaagt a 741

<210> 8
 <211> 480
 <212> PRT
 <213> Staphylococcus simulans

<400> 8
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Leu Ser Thr Phe Ala Leu Ala Ser Ile Val Tyr Gly Gly Ile Gln Asn
 20 25 30

Glu Thr His Ala Ser Glu Lys Ser Asn Met Asp Val Ser Lys Lys Val
 35 40 45

Ala Glu Val Glu Thr Ser Lys Pro Pro Val Glu Asn Thr Ala Glu Val
 50 55 60

Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser
 65 70 75 80

Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro
85 90 95

Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn
100 105 110

Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu
115 120 125

Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr
130 135 140

Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala
145 150 155 160

Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu
165 170 175

Asn Thr Ala Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala
180 185 190

Glu Val Glu Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu
195 200 205

Thr Ser Lys Ala Pro Val Glu Asn Thr Ala Glu Val Glu Thr Ser Lys
210 215 220

Ala Leu Val Gln Asn Arg Thr Ala Leu Arg Ala Ala Thr His Glu His
225 230 235 240

Ser Ala Gln Trp Leu Asn Asn Tyr Lys Tyr Gly Tyr Gly Tyr Gly Pro
245 250 255

Tyr Pro Leu Gly Ile Asn Gly Gly Ile His Tyr Gly Val Asp Phe Phe
260 265 270

Met Asn Ile Gly Thr Pro Val Lys Ala Ile Ser Ser Gly Lys Ile Val
275 280 285

Glu Ala Gly Trp Ser Asn Tyr Gly Gly Asn Gln Ile Gly Leu Ile
290 295 300

Glu Asn Asp Gly Val His Arg Gln Trp Tyr Met His Leu Ser Lys Tyr
305 310 315 320

Asn Val Lys Val Gly Asp Tyr Val Lys Ala Gly Gln Ile Ile Gly Trp
325 330 335

Ser Gly Ser Thr Gly Tyr Ser Thr Ala Pro His Leu His Phe Gln Arg
340 345 350

Met Val Asn Ser Phe Ser Asn Ser Thr Ala Gln Asp Pro Met Pro Phe
355 360 365

Leu Lys Ser Ala Gly Tyr Gly Lys Ala Gly Gly Thr Val Thr Pro Thr
370 375 380

Pro Asn Thr Gly Trp Lys Thr Asn Lys Tyr Gly Thr Leu Tyr Lys Ser
385 390 395 400

Glu Ser Ala Ser Phe Thr Pro Asn Thr Asp Ile Ile Thr Arg Thr Thr
405 410 415

Gly Pro Phe Arg Ser Met Pro Gln Ser Gly Val Leu Lys Ala Gly Gln
420 425 430

Thr Ile His Tyr Asp Glu Val Met Lys Gln Asp Gly His Val Trp Val
435 440 445

Gly Tyr Thr Gly Asn Ser Gly Gln Arg Ile Tyr Leu Pro Val Arg Thr
450 455 460

Trp Asn Lys Ser Thr Asn Thr Leu Gly Val Leu Trp Gly Thr Ile Lys
465 470 475 480

<210> 9
<211> 1825
<212> DNA
<213> *Staphylococcus simulans*

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caatcaatat tattttactt tcttcatcgtaaaaaatgt aatatttata aaaatatgct 180
attctcataa atgtaataat aaatttaggag gtattaaagg tgaagaaaac aaaaaacaat 240
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gtagctgaag tagagacttc aaaacccca gtagaaaata cagctgaagt agagacttca 420
aaagctccag tagaaaaatac agctgaagta gagacttcaa aagctccagt agaaaaataca 480
gctgaagtag agacttcaaa agctccagta gaaaatacag ctgaagtaga gacttcaaaa 540
gctccggtag aaaatacagc tgaagtagag acttcaaaaag ctccggtaga aaatacagct 600

gaagtagaga cttcaaaagc cccagtagaa aatacagctg aagtagagac ttcaaaagct 660
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gtagaaaata cagctgaagt agagacttca aaagctccgg tagaaaatac agctgaagta 840
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tatatgataa ttagagcaaa taaaaatttt ttctcattcc taaagtggaa gctttcgta 1740
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<210> 10
<211> 6457
<212> DNA
<213> Achromobacter lyticus

<400> 10
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tctgatttca ctaataatgc ttttacgca agtGattaca ttttaatggt atttcaaaca 180
caacaatctg cttatgaaag tagtcttca tttgttaatt ttttaaggga tcgaaaaaaaa 240
gaatcagatt tatcatttga attgggtggc gctgtccag tattaattaa aaaaagtgg 300
cgtgtagata aacagatatt agatatgtct aaatcagcat tttctgaagc actctttgag 360
aaccagatatt atcaaagaga aagaataaaaa aaatttgcg ctgatggaaat aaaaagataaa 420
gatatgcattt acaaaaaagt tatatatatg tttaacaaag tctacgaaga attagttgat 480
agagtttagat taatttgaagg tgagtgtat ttagggcagg atttttagat aacatagata 540
catctgaggt aaaatatacg gaaaattata aaccggatc taaaagtacg actatgagag 600
tggacactga tataaaaaaaa agattaaatc aaatggcggt agataaaagat acatctataa 660
agctatagt ttagtggatg ttaggagaat tttgaaaaaa aaataagtat tagtatttt 720
tataggctct atactatttta ggactggtga taatcactag tccttattt gataaaaaaa 780
agcgcaatta tctctataat tagaagtatc ctaccaccaa taattaagga aataatgcgc 840
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